CDP-68/207ESD/750

SERVICE MANUAL

US Model
CDP-68

US Model
CDP-207ESD

US Model
Canadian Model
AEP Model
UK Model
E Model
CDP-750

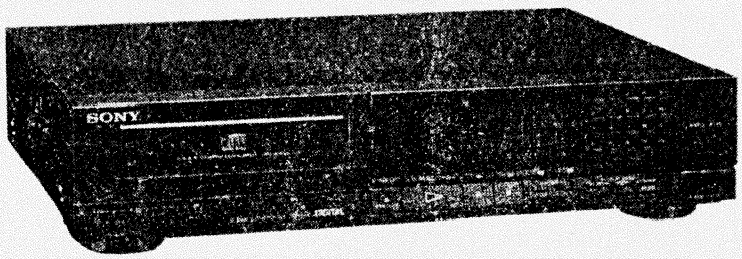

PHOTO: CDP-750

SPECIFICATIONS

Compact disc player

System	Compact disc player
Laser	Semiconductor laser (λ = 780 nm)
Laser output	Max. 0.4 mW * This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response	2 Hz – 20 kHz (±0.5 dB)
Signal to noise ratio	More than 102 dB
Dynamic range	More than 95 dB
Harmonic distortion	Less than 0.003% (at 1 kHz)
Channel separation	More than 95 dB
Wow and flutter	Below measurable limit (±0.001% WPEAK)

Outputs

	Type	Output level	Load impedance
LINE OUT	Phono jack	2 V (50 kilohms)	more than 10 kilohms
HEADPHONES	Stereo jack	6.6 mW (32 ohms)	—
DIGITAL OUT (CDP-207ESD/750: AEP, UK models only)	Phono jack	0.5 Vp-p (75 ohms)	75 ohms

General

Power requirements
- US, Canadian Model . . . 120V AC, 60Hz
- AEP Model. . . . . 220V AC, 50/60Hz
- UK Model. . . . . 240V AC, 50/60Hz
- E Model. . . . . 110–120, 220–240V AC, 50/60Hz

Power consumption: 12W

Dimensions: Approx. 430 × 100 × 340 mm (w/h/d) (17 × 4 × 13½ inches) including projecting parts and controls

Weight: Approx. 4.7kg (10 lbs 6 oz), net

Remote commander (suppiled) RM-D450

Remote control system: Infrared control

Power requirements: 3 V DC with two R6 batteries (size AA)

Dimensions: 62 × 20 × 168.5 mm (w/h/d) ($2^{1}/_{2} \times {}^{13}/_{16} \times 6^{3}/_{4}$ inches)

Weight: 130 g (5 oz) including batteries

Supplied accessories

Connecting cord (2 phono plugs ⟷ 2 phono plugs)	1
Remote commander	1
R6 batteries	2

MICROFILM

COMPACT DISC PLAYER

SONY

AUD

FEATURES

- PROGRAM play for playing up to 20 selections in a desired order
- SHUFFLE play for playing the selections in a random order
- REPEAT function for a single selection, the whole disc, PROGRAM play, or SHUFFLE play. Or for a particular portion of a selection.
- Easy-to-read display window shows the track number being played, elapsed playing time, and the remaining time, and indicates the repeat play, shuffle play, auto space functions.
- Auto space function for creating a blank space of 3 seconds between each selection.
- Timer play for initiating disc play at a desired time (a commercially available timer is required).
- Index search function for quickly locating a desired part *

* Example: A movement in a symphony. Index search can be used only for discs having index numbers. Such discs have (INDEX) mark.

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

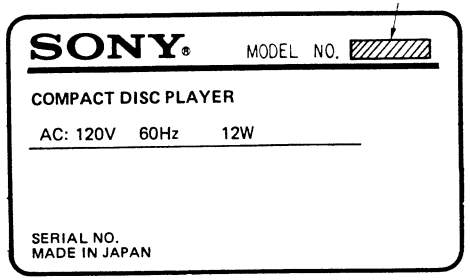
LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

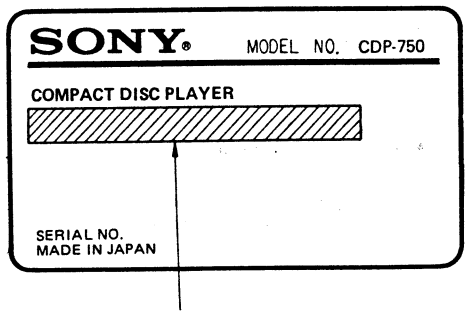
CDP-68/207ESD/750

MODEL IDENTIFICATION

– Specification Labels –

CDP-68
CDP-207ESD





US, Canadian model: AC: 120 V~60 Hz 12W
AEP model: AC: 220 V~50/60 Hz 12W
UK model: AC: 240 V~50/60 Hz 12W
E model: AC: 110–120 V, 220–240 V
~50/60 Hz 12 W

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

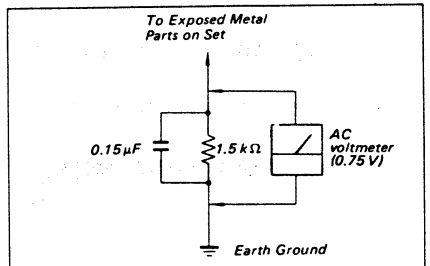


Fig. A. Using an AC voltmeter to check AC leakage.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties
   - Material: GaAlAs
   - Wavelength: 780 nm
   - Emission Duration: continuous
   - Laser Output: max. 44.6 μW*
     * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optiocal Pick-up Block (including APC borad).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

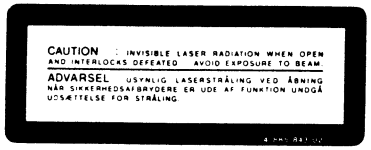
1. Laser-didoe data
   - Materiale: GaAlAs
   - Bølgelængde: 780 nm
   - Udstråling: Kontinuerlig
   - Laseroutput: Max. 0,4 mW*
     * Målt i 1,6 mm afstand fra overfladen af objektivlinsen på den optiske pick-up enhed.
   - Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laserdioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING.

VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkymätöntä) silmille vaarallista lasersateilyä.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 25 cm away from the objective lens.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

LASER DIODE AND FOCUS SERCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the operation indicated in Fig. A is performed while observing the objecting lens.

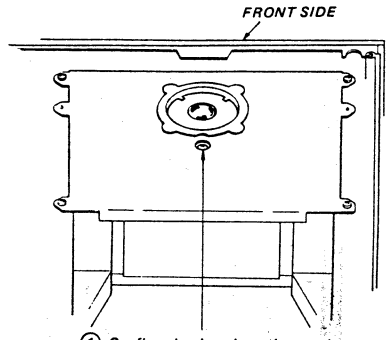
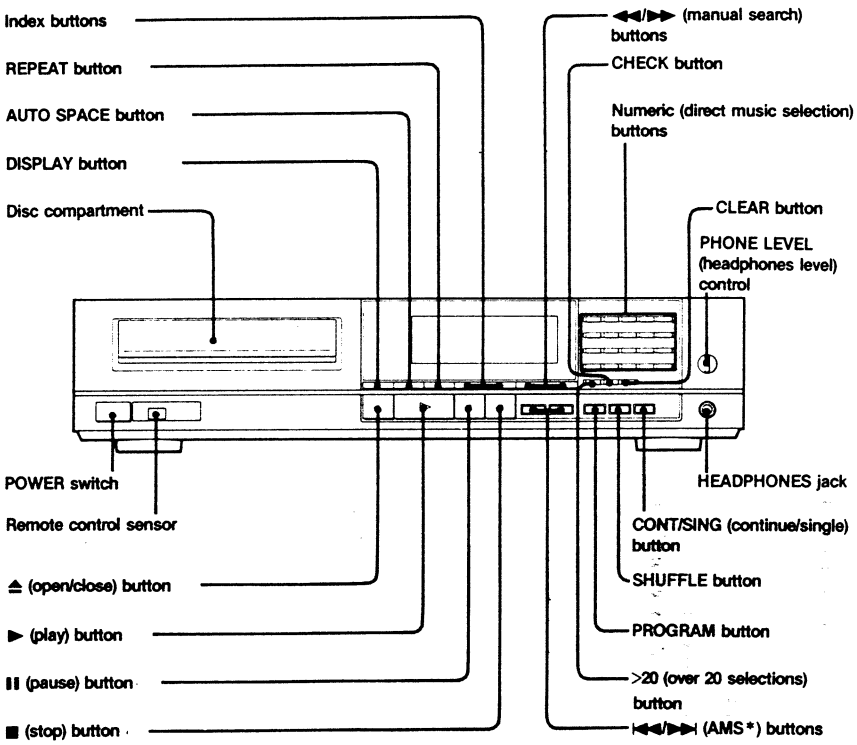


Fig. A

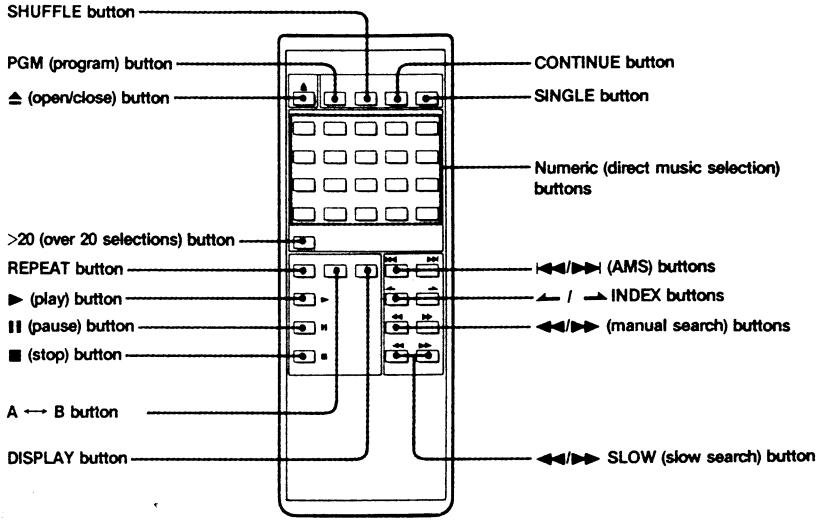
LOCATION AND FUNCTION OF CONTROLS

FRONT PANEL



* AMS is an abbreveation of Automatic Music Sensor.

Remote Commander



Remote Control Operation

Once POWER is turned on, you can remotely control various functions of the player with the supplied remote commander.

Notes on the remote control

- Keep the commander away from extremely hot or humid places.
- Avoid dropping any foreign objects inside the commander case, particularly when replacing batteries.
- To avoid malfunctions, do not simultaneously depress two or more buttons.
- The remote sensor should not be exposed to direct illumination, especially direct sunlight, because this may prevent picking up the signals from the remote commander.

Operations which cannot be performed with the remote commander

- Turning the power on and off.
- Checking the programmed selections.
- Setting or releasing auto space function.

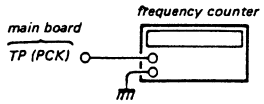
SECTION 1
ADJUSTMENTS

ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-18 (Part No.: 3-702-101-01) disc unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.

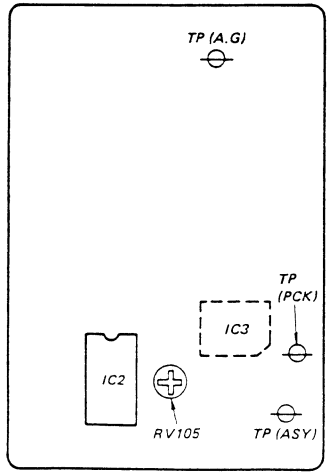
RF PLL Frequency Adjustment/Lock Frequency Check

Procedure:



1. Connect test point TP (ASY) to ground with lead wire.
2. Turn POWER switch on.
3. Connect the frequency counter to test point TP (PCK).
4. Adjust RV105 so that the reading on frequency counter is 4.3218 MHz ± 30 kHz.
   . . . . . (RF PLL frequency adjustment)
5. Remove lead wire connecting TP (ASY) to ground.
6. Put disc (YEDS-18) in and press ▷ button.
7. Confirm that the reading on frequency counter is 4.3218 MHz.

Adjustment Location: main board

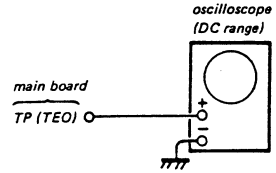


COMPONENT SIDE (FRONT)

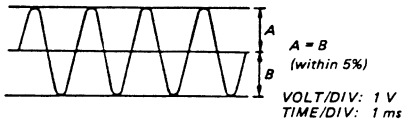
E-F Balance Adjustment

This adjustment should be made when replacing Optical pick-up Block.

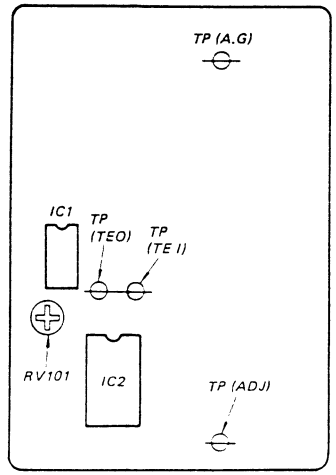
Procedure:



1. Connect test point TP (ADJ) and test point TP (TE I) to ground with lead wire.
2. Connect oscilloscope to test point TP (TEO).
3. Turn POWER switch on.
4. Put disc (YEDS-18) in and press ▷ button.
5. Adjust RV101 so that the traverse waveform is symmetrical above and below.
6. After adjustment, remove the lead wire connected in step 5.



Adjustment Location: main board



COMPONENT SIDE (FRONT)

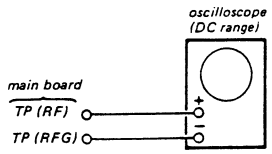
CDP-68/207ESD/750

REFERENCE

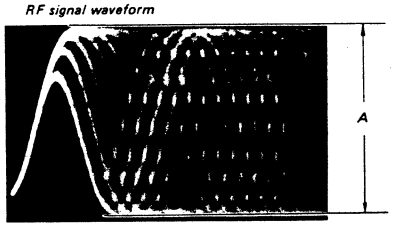
Focus Bias Adjustment

This adjustment should be made when replacing Optical pick-up Block.

Procedure:

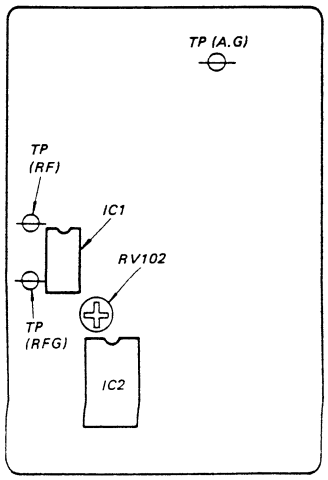


1. Connect oscilloscope to test point TP (RF) and test point TP (RFG).
2. Turn POWER switch on.
3. Put disc (YEDS-18) in and press ▷ button.
4. Adjust RV102 for an optimum waveform eye pattern or so that the peak is maximum. Optimum eye pattern means that shape " ◇ " can be clearly distinguished at the center of the waveform.



A = 1.2V ± 0.2 (Vp-p)

Adjustment Location: main board



COMPONENT SIDE (FRONT)

Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

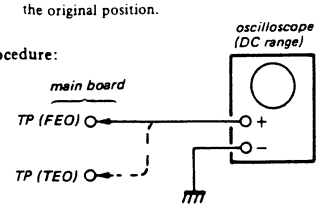
Symptoms \ Gain	Focus	Tracking
• The time until music starts becomes longer for STOP →▷PLAY or automatic selection (⏮ ⏭ buttons pressed. (Normally takes about 2 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP→▷PLAY or automatic selection (⏮ ⏭ buttons pressed.)	–	low
• Disc table opens shortly after STOP→▷PLAY.	low or high	–
• Sound is interrupted during PLAY. Or time counter display stops progressing.	–	low
• More poise during 2-axis device operation.	high	high

The following is a simple adjustment method.

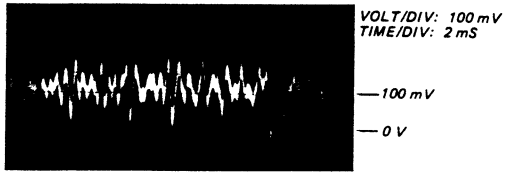
– Simple Adjustment –

Note: Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure:

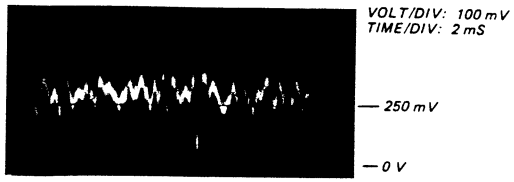


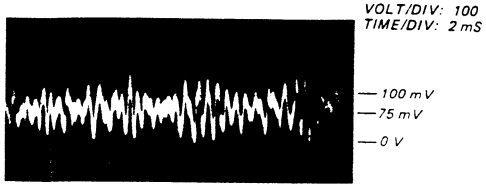
1. Keep the set horizontal.
   (If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
2. Insert disc (YEDS-18: Fifth Selection) and press ▷PLAY button.
3. Connect oscilloscope to main amp board TP (FEO).
4. Adjust RV103 so that the waveform is as shown in the figure below. (focus gain adjustment)



- Incorrent Examples (DC level changes more than on adjusted waveform)

low focus gain

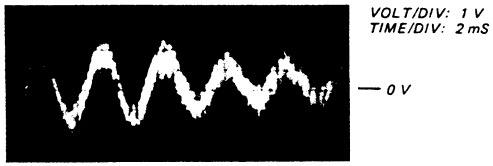




5. Connect oscilloscope to main board TP (TEO).
6. Adjust RV104 so that the waveform is as shown in the figure below. (tracking gain adjustment)

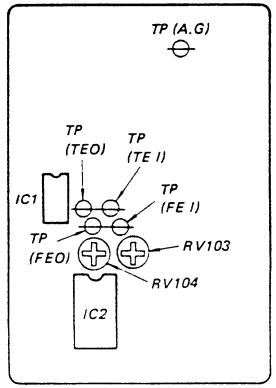
- Incorrect Examples (fundamental wave appears)

low tracking gain



high tracking gain
(higher fundamental wave than for low gain)

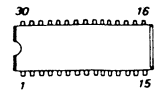
Adjustment Location: main board



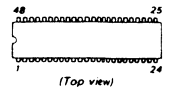
COMPONENT SIDE (FRONT)

● Semiconductors Lead Layout

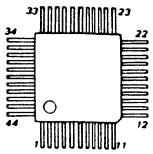
CXA1081S



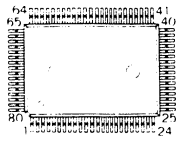
CXA1182S



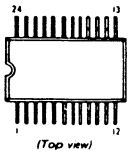
CXD1088Q



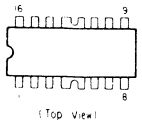
CXD1125Q



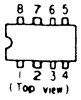
CXK5816M-10L



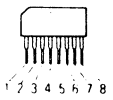
LA6520



M5218P
M74HC6004P
μPC4570C

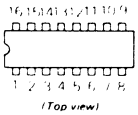


M5230L-A

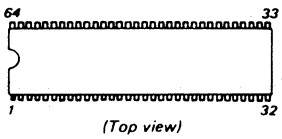


M5231TL

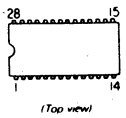
M5290P-16
TA8406P



MSC6458-17SS



TDA1541-N5



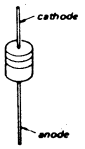
2SA1345
2SC3399
2SC3402
2SC3860

2SB1013
2SC3622AK

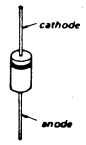
2SB1014

2SB1274SA
2SD1913SA

HZS9B2L
RD5.1ESB

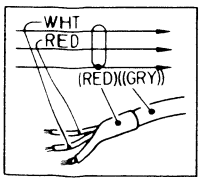


1SS132
10E2



Note:

- Color code or sleeving over the end of the jacket.

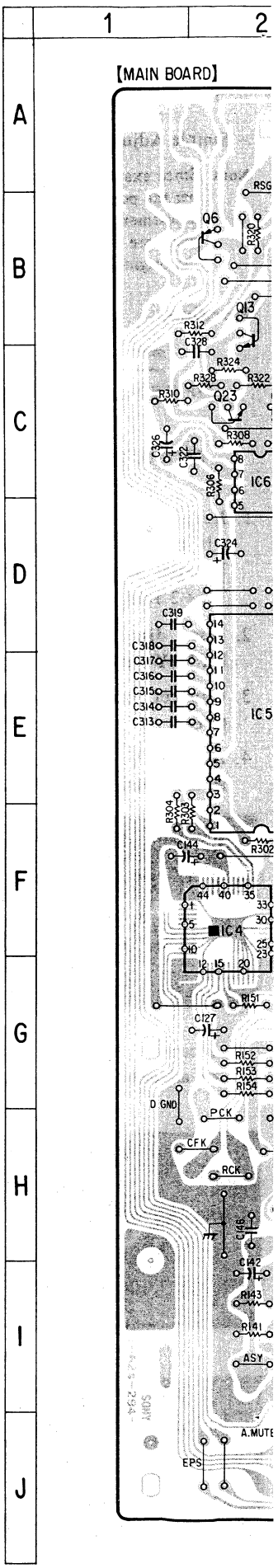


- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ⊡ indicates side identified with part number.
- ○—●—○ : Jumper wire connected to the ground pattern on the component side.

SECTION 2 DIAGRAMS

Ref.No.	Location
IC1	F-6
IC2	H-5
IC3	G-3
IC4	F-2
IC5	E-2
IC6	C-2
IC7	J-7
IC8	H-7
IC9	D-4
IC10	D-7
IC11	B-4
IC12	F-4
IC13	F-3
IC101	I-12
IC102	E-10
IC201	E-16
Q1	D-4
Q2	D-4
Q3	E-6
Q4	D-3
Q5	C-3
Q6	B-2
Q7	G-6
Q8	H-4
Q9	I-4
Q10	J-2
Q11	G-4
Q12	B-2
Q13	B-2
Q14	B-3
Q15	B-2
Q20	B-3
Q21	C-4
Q22	C-2
Q23	C-2
Q24	D-3
Q25	D-3
Q26	D-3
Q601	I-14
Q602	I-14
Q603	I-14
Q604	I-14
Q605	I-14
D1	D-6
D2	D-5
D3	D-6
D4	D-6
D5	D-6
D6	C-5
D7	C-5
D8	C-5
D9	C-5
D10	E-7
D11	G-7
D12	J-2
D13	E-3
D14	C-4
D105	C-5
D106	C-5
D601	I-10
D602	I-10
D603	H-10
D604	I-14
D605	I-14
D606	I-14
D607	I-14
D608	I-9

2-1. PRINTED WIRING BO



D WIRING BOARDS ● See page 18 for IC BLOCK DIAGRAMS

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

MAIN BOARD]

J301 LINE OUT

J401 DIGITAL OUT

CDP-750:E MODEL

S902 VOLTAGE SELECTOR

110 220 120V 240V

※ NOT REPACEABLE BULT IN TRANSFORMER

T901 POWER TRANSFORMER

CDP-207ESD/750: AEP, UK MODEL

CDP-750:AEP, UK, E MODEL

CDP-68/207ESD/750: US, Canadian, AEP, UK MODEL

CDP-68/207ESD/750: US, Canadian MODEL

CDP-750:AEP, UK, E MODEL

CDP-68/207ESD/750: US, Canadian MODEL

CDP-750:AEP, UK, E MODEL

CDP-68/207ESD/750: US, Canadian MODEL

CDP-750:AEP, UK, E MODEL

CDP-68/207ESD/750: US, Canadian MODEL

CDP-750:AEP, UK, E MODEL

CDP-68/207ESD/750: US, Canadian MODEL

CDP-207ESD/750: AEP, UK MODEL

CDP-207ESD/750: AEP, UK MODEL

CDP-207ESD/750: AEP, UK MODEL

CDP-207ESD/750: AEP, UK MODEL

CDP-68/207ESD/750: US, Canadian MODEL

IC1 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12 IC13

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q20 Q21 Q22 Q23 Q24 Q25 Q26

D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D105 D106

PS001 PS002 PS201 PS202

CNP301 CNP101 CNP102 CNP103 CNP104 CNP105 CNP106 CNP001

AC IN

【SL/SP MOTOR BOARD】

CNJ251 M252 M253 C252 C253 S252 LIMIT(IN)

【TRANSLATION 5 BOARD】

(BU CHASSIS) GRY BLK (MD CHASSIS) CN260 CN256 CN258

【IN/OUT SW BOARD】

S251 LOADING SWITCH IN ⟷ OUT

【L.MOTOR BOARD】

M251 C251

KSS150A OPTICAL PICK-UP BLOCK

(TRANSLATION BOARD)

JUMPER FLEXIBLE BOARD

【HEADPHONE BOARD】

J501 HEADPHONES

RV501 PHONE LEVEL

CNJ501

【POWER SW BOARD】

S701 POWER

IC102

CNP701

【FUNCTION BOARD】

S601 PROGRAM S602 ▷ S603 REPEAT S604 OPEN/CLOSE S605 CHECK S606 CLEAR S607 SHUFFLE S608 ■ S609 AUTO SPACE S610 |◁◁ S611 ◁◁ S612 CONTINUE S613 ■ S614 DISPLAY S615 ▷▷| S616 ▷▷ S617 1 S618 2 S619 3 S620 4 S621 5 S622 ← S623 6 S624 7 S625 8 S626 9 S627 10 S628 → S629 11 S630 12 S631 13 S632 14 S633 15 S634 >20 S635 16 S636 17 S637 18 S638 19 S639 20 AMS PLAY MODE

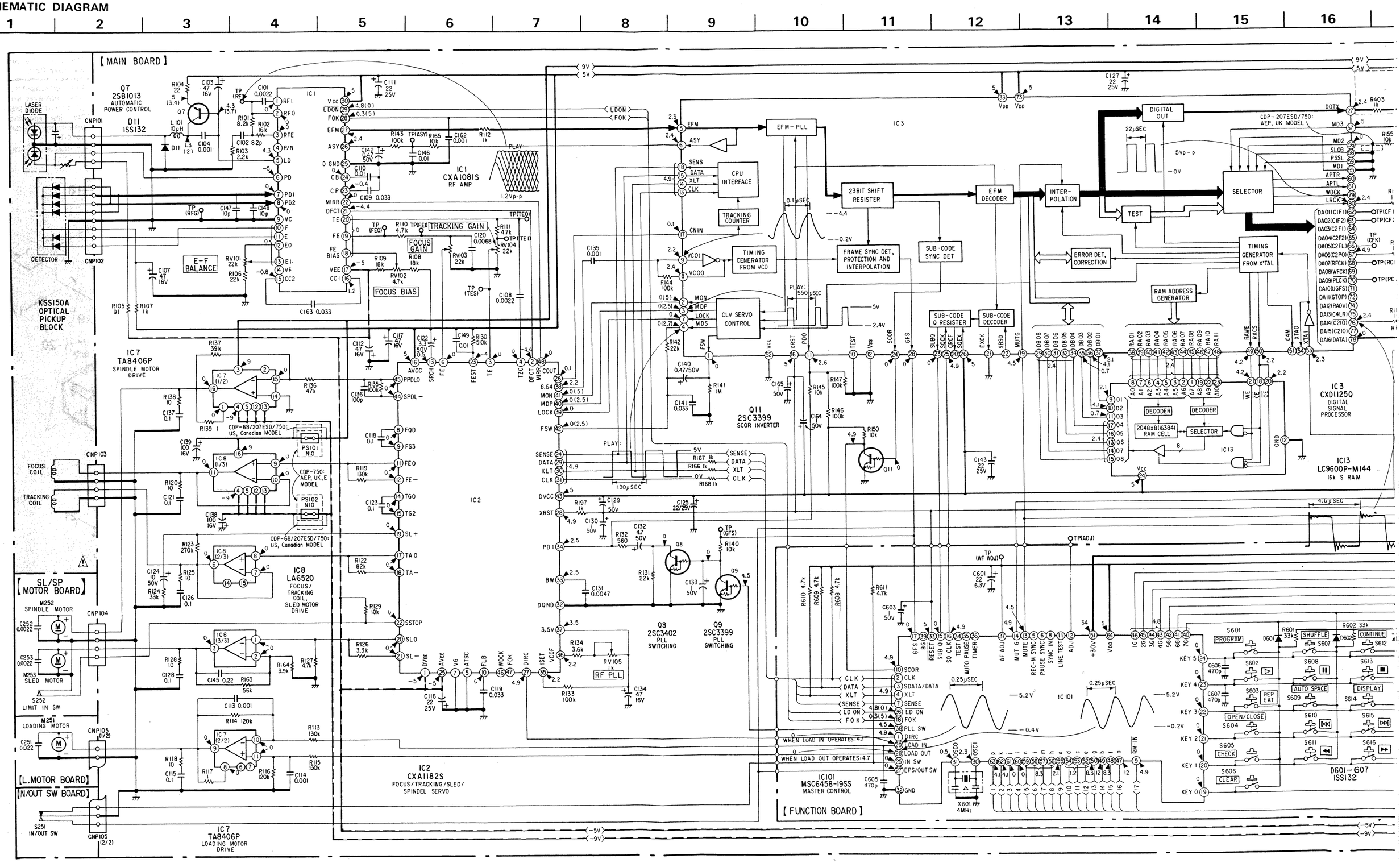
FLD501

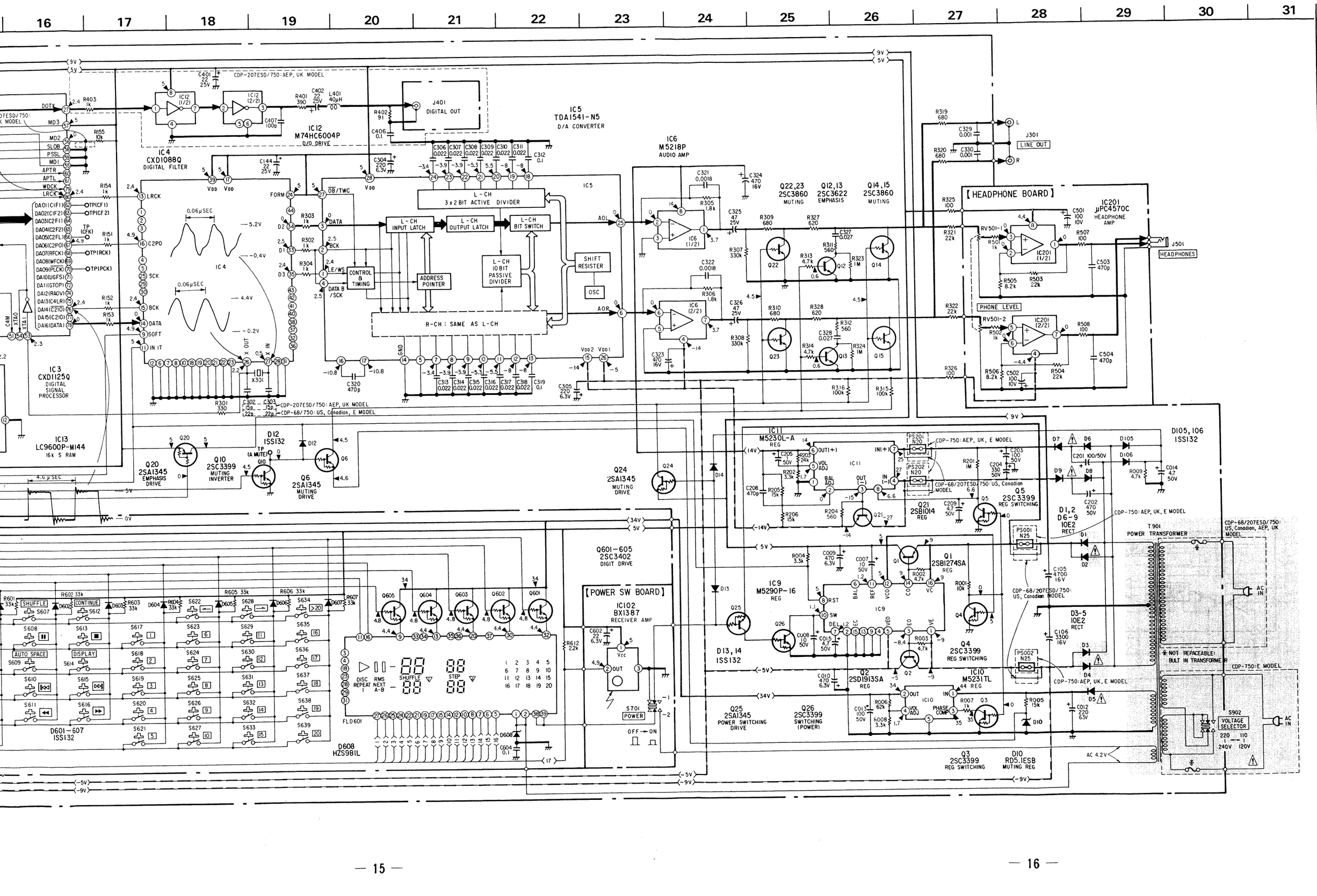
IC101

X601

JUMPER FLEXIBLE BOARD

2-2. SCHEMATIC DIAGRAM




IC5 TDA1541-N5 D/A CONVERTER
IC6 M5218P AUDIO AMP
IC12 M74HC6004P D/O DRIVE
IC4 CXD1088Q DIGITAL FILTER
IC3 CXD1125Q DIGITAL SIGNAL PROCESSOR
IC13 LC9600P-MI44 16k S RAM
L-CH 3 x 2 BIT ACTIVE DIVIDER
L-CH INPUT LATCH
L-CH OUTPUT LATCH
L-CH BIT SWITCH
L-CH 10 BIT PASSIVE DIVIDER
R-CH : SAME AS L-CH
ADDRESS POINTER
CONTROL & TIMING
SHIFT RESISTER
OSC
J401 DIGITAL OUT
J301 LINE OUT
J501 HEADPHONES
【HEADPHONE BOARD】
IC201 μPC4570C HEADPHONE AMP
PHONE LEVEL
Q22,23 2SC3860 MUTING
Q12,13 2SC3622 EMPHASIS
Q14,15 2SC3860 MUTING
Q20 2SA1345 EMPHASIS DRIVE
Q10 2SC3399 MUTING INVERTER
Q6 2SA1345 MUTING DRIVE
Q24 2SA1345 MUTING DRIVE
Q601-605 2SC3402 DIGIT DRIVE
【POWER SW BOARD】
IC102 BX1387 RECEIVER AMP
S701 POWER
D601-607 1SS132
D608 HZS9B1L
FLD601
IC11 M5230L-A REG
IC9 M5290P-16 REG
IC10 M5231TL REG
Q1 2SB1274SA REG
Q2 2SD1913SA REG
Q21 2SB1014 REG
Q5 2SC3399 REG SWITCHING
Q4 2SC3399 REG SWITCHING
Q3 2SC3399 REG SWITCHING
Q25 2SA1345 POWER SWITCHING DRIVE
Q26 2SC3399 SWITCHING (POWER)
D10 RD5.1ESB MUTING REG
D13,14 1SS132
D105,106 1SS132
D1,2 D6-9 10E2 RECT
D3-5 10E2 RECT
T901 POWER TRANSFORMER
* NOT REPACEABLE: BULT IN TRANSFORMER
S902 VOLTAGE SELECTOR
CDP-207ESD/750: AEP, UK MODEL
CDP-68/750: US, Canadian, E MODEL
CDP-750: AEP, UK, E MODEL
CDP-68/207ESD/750: US, Canadian MODEL
CDP-68/207ESD/750: US, Canadian, AEP, UK MODEL
CDP-750: E MODEL
0.06μSEC
4.6μSEC
5.2V
0.4V
4.4V
0.2V
AC 4.2V
AC IN
240V 120V
9V 5V -5V -9V 34V -14V 14V

CDP-68/207ESD/750
CDP-68/207ESD/750

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

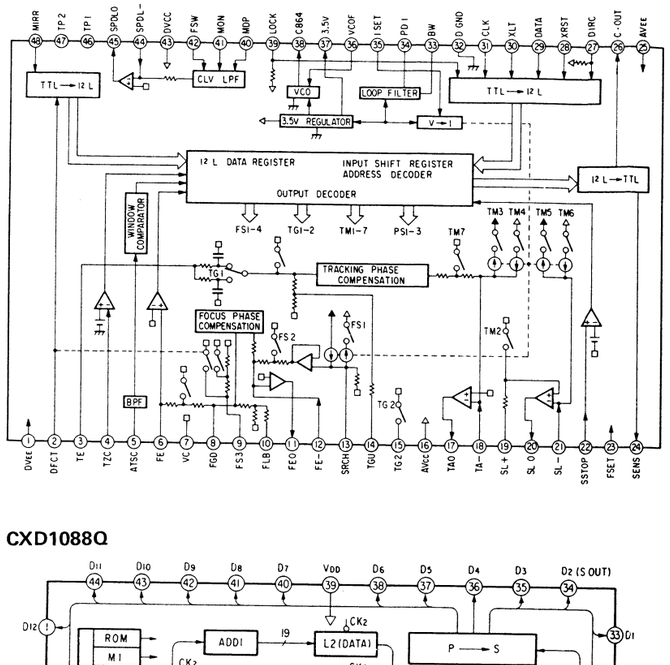
Switch

Ref. No.	Switch	Position
S251	LOADING	IN
S252	LIMIT	ON
S601–639	KEY MATRIX	
S701	POWER	OFF
S902	VOLTAGE SELECTOR	(110–120V) ↕ (220–240V)

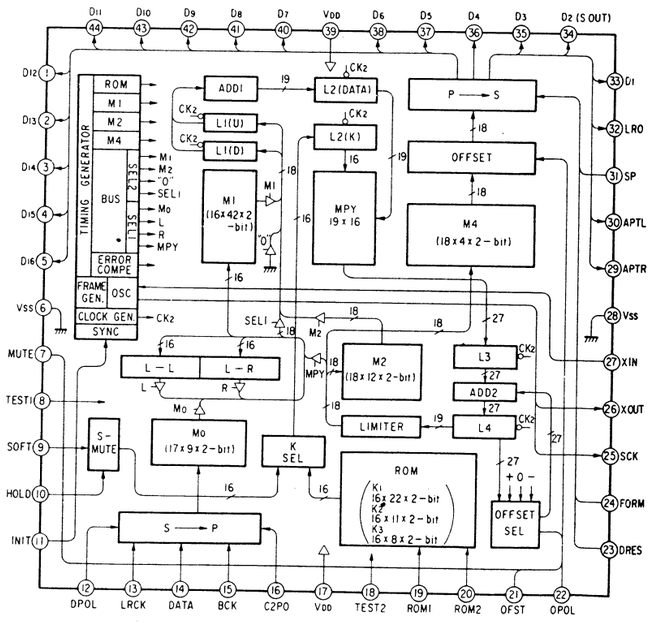
- ▬▬ : B+ bus.
- ▬ ▬ : B– bus.
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : STOP mode
  ( ) : CD Playing mode
- Voltages are taken with a VOM (50 kΩ/V). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path. ➡

• IC BLOCK DIAGRAMS

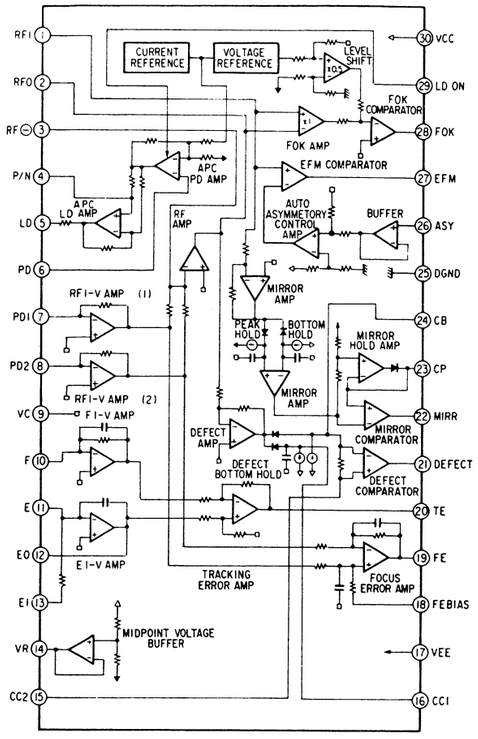
CXA1182S



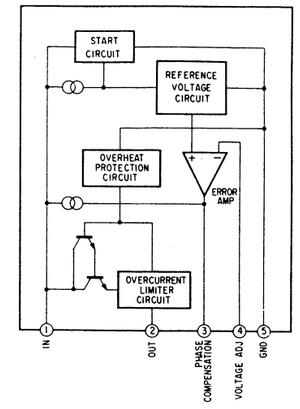
CXD1088Q



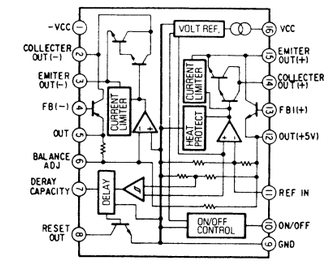
CXA1081S



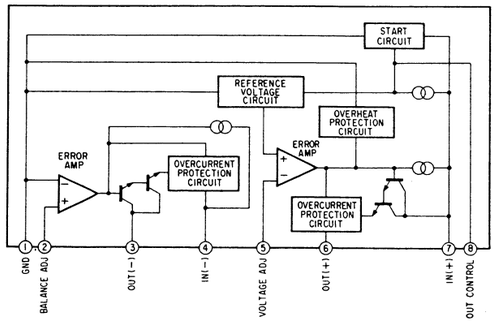
M5231TL



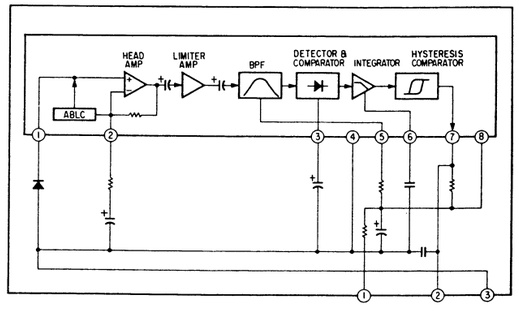
M5290-16



M5230L-A



BX-1387



CDP-68/207ESD/750

Description of IC101 (MSC6458)

IC101 has the following functions:

- . Digital signal output to operation key
- . Sub Q signal loading and processing
- . Fluorescent display (FLD) control
- . Servo circuit control

Pin Function

Pin No.	Pin name	I/O	Description
1	DIRC	O	Jump pulse inversion instruction during 1 track jump.
2	CLK	O	Command transfer of clock to SSP (IC2) and DSP (IC3).
3	DATA	O	Command transfer of data to SSP (IC2) and DSP (IC3).
4	XLT	O	Command transfer of latch to SSP (IC2) and DSP (IC3).
5	M-SYNC	O	Sync REC ("H" for 300msec during muting).
6	P-SYNC	O	Sync REC ("H" for 300msec when muting is off).
7	SENSE	I	SSP (IC2) and DSP (IC3) sense information.
8	SYNC ON	I	Sync REC ("L" in REC mode).
9	SIRSC	I	Remote control signal input.
10	$\overline{\text{SCOR}}$	I	Q code read timing.
11	VL UP	O	Remote controller. "L" when volume is being increased.
12	ADJ	I	"L" in PLAY mode.
13	AMUTE	O	All muting. Output to DSP (IC3) MUTG.
14	DMUTE	O	Software muting. Output to digital filter (IC4) software.
15	SUBQ	I	Subcode data.
16	SQCLK	O	Subcode data read clock.
17	GFS	I	"H" when CLV is locked.
18	FOK	I	"H" when focus is on.
19	KEY0	I	Key matrix input, "H" active.
20	KEY1	I	Key matric input, "H" active.
21	KEY2	I	Key matrix input, "H" active.
22	KEY3	I	Key matrix input, "H" active.
23	KEY4	I	Key matrix input, "H" active.
24	KEY5	I	Key matrix input, "H" active.
25	$\overline{\text{INSW}}$	I	Loading IN SW.
26	$\overline{\text{LDON}}$	O	Laser on/off.
27	$\overline{\text{EPS}}$/$\overline{\text{OUTSW}}$	I/O	Emphasis on/off (during loading). Loading OUT SW.
28	LODOUT	O	Loading motor control.
29	LODIN	O	Loading motor control.
30	OSC1	I	Oscillator input terminal (4 MHz).
31	OSC0	I	Oscillator input terminal (4 MHz).
32	GND	-	GND terminal.
33	RESET	I	Reset input terminal. Input when power is turned on.
34	TEST	-	No connection (NC).
35	VL DOWN	-	No connection (NC).
36	TIMER	-	No connection (NC).
37	AFADJ	I	"L" in PLAY mode. CLV-S is fixed. "L" in test mode before power is turned on.
38	PLLSW	O	"L" in PLAY mode and "H" in search mode.
39	8G	-	FLD timing output.
40	7G	O	FLD timing output.
41	6G	O	FLD timing output.
42	5G	O	FLD timing output.
43	4G	O	FLD timing output.
44	3G	O	FLD timing input.
45	2G	O	FLD timing input.
46	1G	O	FLD timing input.
47	a	O	FLD segment output.
48	f	O	FLD segment output.
49	b	O	FLD segment output.
50	g	O	FLD segment output.
51	+30V	-	+30V
52	e	O	FLD segment output.
53	c	O	FLD segment output.
54	d	O	FLD segment output.
55	o	O	FLD segment output.
56	h	O	FLD segment output.
57	m	O	FLD segment output.
58	i	O	FLD segment output.
59	n	O	FLD segment output.
60	l	O	FLD segment output.
61	j	O	FLD segment output.
62	k	O	FLD segment output.
63	p	O	FLD segment output.
64	VDD	-	Positive (+) power supply (5V)

SECTION 3
EXPLODED VIEWS AND PARTS LIST

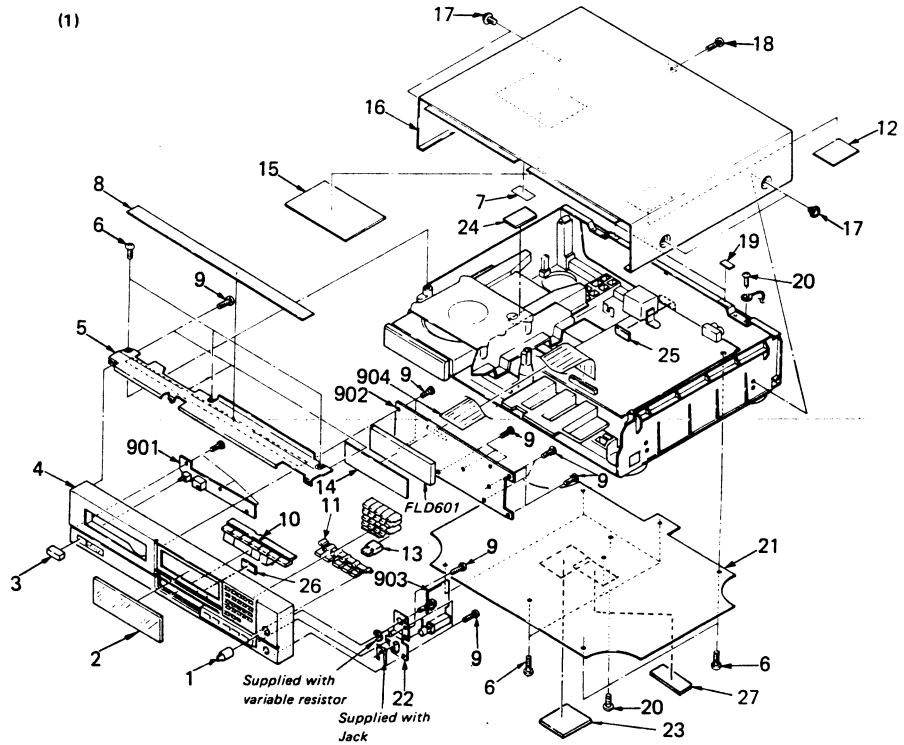
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts' Color

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

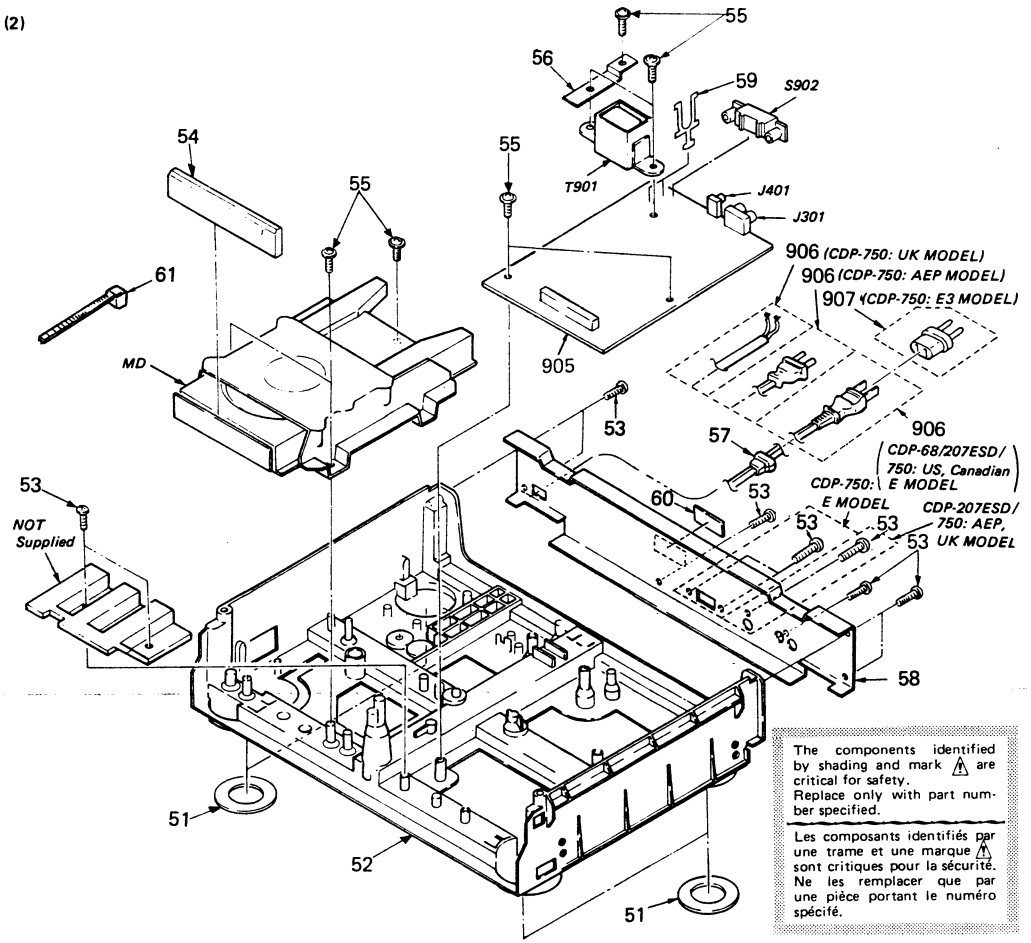
(1)



No.	Part No.	Description	Remarks
1	4-917-454-01	KNOB, LOV	
2	4-922-918-01	(CDP-207ESD/750:AEP,UK) ...PLATE, INDICATION	
	4-922-918-31	(CDP-68/750:US,Canadian,E) ...PLATE, INDICATION	
3	4-922-921-01	BUTTON (POWER)	
4	X-4922-903-1	(CDP-750:US,Canadian)...PANEL ASSY, FRONT	
	X-4922-904-1	(CDP-750:AEP,UK).....PANEL ASSY, FRONT	
	X-4922-905-1	(CDP-750:E).....PANEL ASSY, FRONT	
	X-4922-906-1	(CDP-68).....PANEL ASSY, FRONT	
	X-4922-907-1	(CDP-207ESD).....PANEL ASSY, FRONT	
5	*4-922-924-01	BRACKET, PANEL	
6	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
7	*4-922-937-01	CUSHION	
8	*4-922-933-01	SPACER	
9	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
10	X-4922-908-1	BUTTON ASSY	
11	4-922-923-11	BUTTON (AMS)	
12	3-831-441-XX	CUSHION (T)	
13	4-922-920-01	BUTTON (M.C)	
14	*4-918-119-01	FILTER	

No.	Part No.	Description	Remarks
15	*4-917-634-01	DAMPER (C)	
16	4-912-939-01	CASE	
17	7-685-646-79	SCREW, TAPPING	
18	4-886-821-01	SCREW, M3 CASE	
19	3-568-749-00	CUSHION, ECM	
20	7-682-147-01	SCREW +BVTT 3X6 (S)	
21	*4-922-927-31	PLATE, BOTTOM	
22	*4-922-914-01	BRACKET, VR	
23	3-703-680-00	(CDP-68/207ESD/750:US) ...LABEL, CAUTION, SUB NEW UL	
24	4-885-843-02	(CDP-750:AEP,UK,E)..LABEL, CAUTION, LASER	
25	*4-922-939-01	(CDP-750:UK)...CUSHION	
26	*4-923-565-01	SPACER	
27	3-703-079-21	(CDP-750:UK)...LABEL, CAUTION (BACK)	
901	*1-624-296-11	PC BOARD, POWER SWITCH	
902	*1-624-295-11	PC BOARD, FUNCTION	
903	*1-624-297-11	PC BOARD, HEADPHONE	
904	1-535-684-11	JUMPER, FILM (WITH TERMINAL) (JUMPER FLEXIBLE BOARD)	
FLD601	1-519-411-11	INDICATOR TUBE, FLUORESCENT	

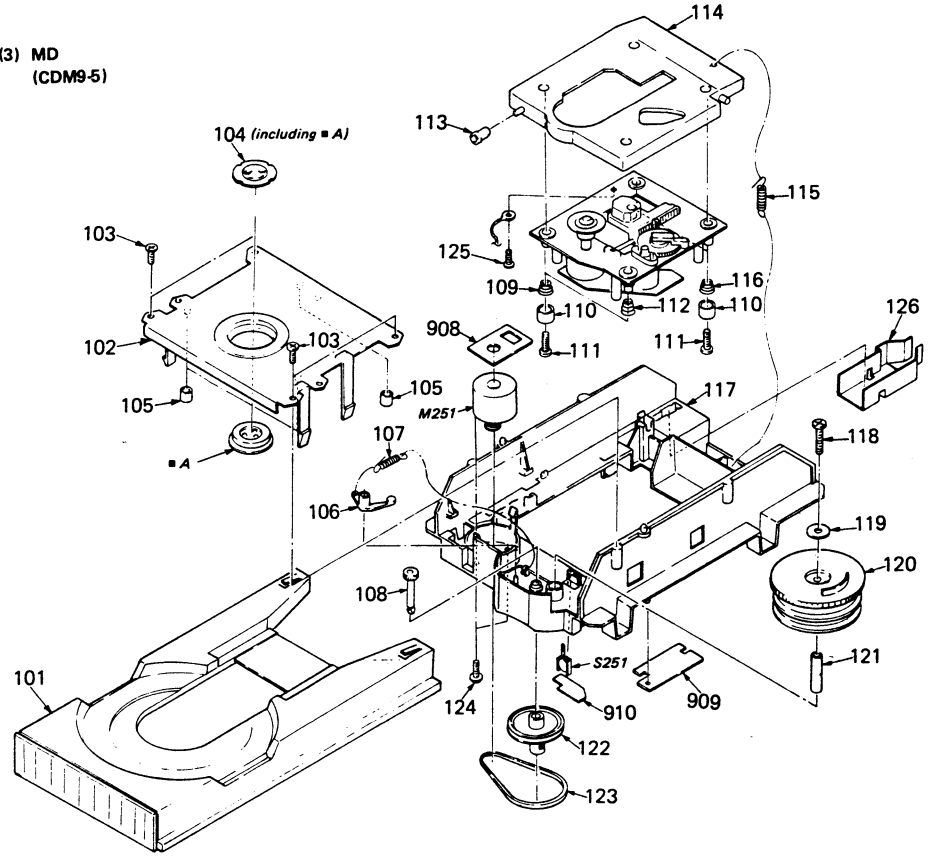
(2)



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(3) MD
(CDM9-5)



No.	Part No.	Description	Remarks
51	4-922-915-01	FOOT (FELT)	
52	*4-922-928-01	CHASSIS	
53	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
54	4-922-410-41	(CDP-750:US)....PANEL, LOADING	
	4-922-919-01	(CDP-207ESD/750:AEP,UK,Canadian,E) ...PANEL, LOADING	
	4-922-919-11	(CDP-68).....PANEL, LOADING	
55	7-685-647-79	SCREW, TAPPING	
56	*4-922-423-01	REINFORCEMENT (TRANSFORMER)	
57	⚠3-703-244-00	(CDP-68/207ESD/750:US,Canadian, AEP,UK) ...BUSHING (2104), CORD	
	⚠3-703-571-11	(CDP-750:E) ...BUSHING (S)(4516), CORD	
58	*4-922-501-11	(CDP-207ESD).....PANEL, BACK	
	*4-922-501-21	(CDP-750:US).....PANEL, BACK	
	*4-922-501-31	(CDP-68).....PANEL, BACK	
	*4-922-501-41	(CDP-750:Canadian)...PANEL, BACK	
	*4-922-501-51	(CDP-750:AEP).....PANEL, BACK	
	*4-922-501-61	(CDP-750:UK).....PANEL, BACK	
58	*4-922-501-71	(CDP-750:E).....PANEL, BACK	
59	*1-535-688-11	TERMINAL	
60	*4-885-838-00	(CDP-750:AEP,UK,E)...LABEL, CLASS 1	
61	3-701-748-00	(CDP-750:UK)...CLAMP	

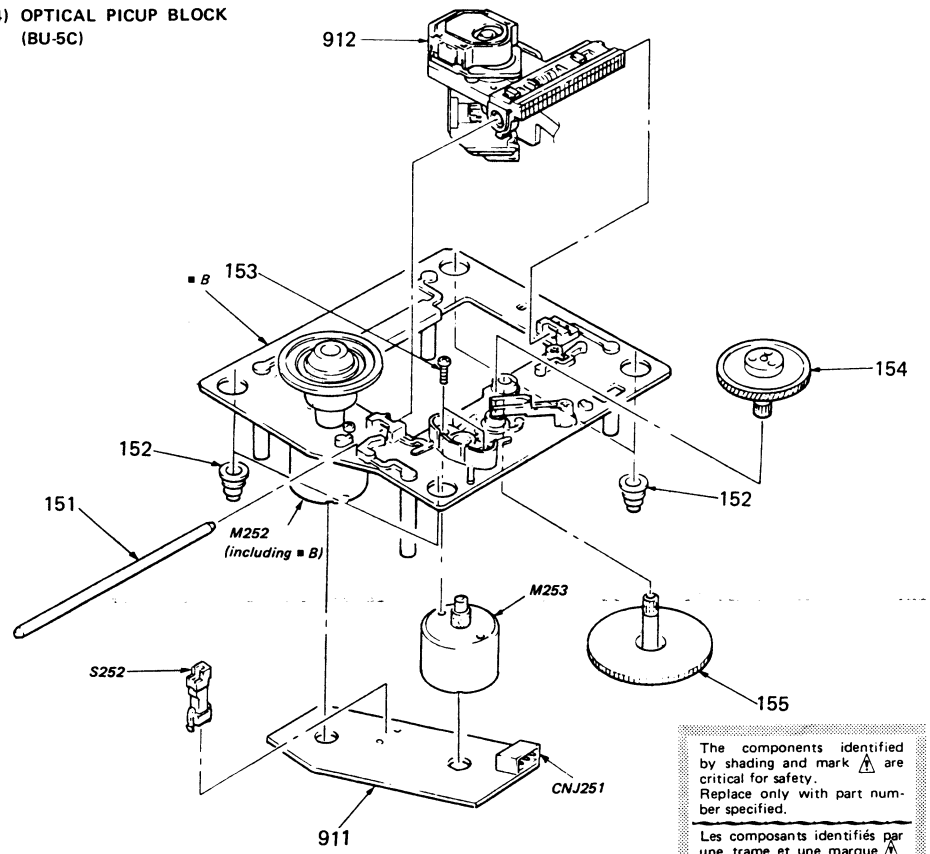
No.	Part No.	Description	Remarks
905	*A-4651-152-A	(CDP-207ESD).....MOUNTED PCB, MAIN	
	*A-4651-154-A	(CDP-68/750:US,Canadian) ...MOUNTED PCB, MAIN	
	*A-4651-155-A	(CDP-750:AEP,UK)...MOUNTED PCB, MAIN	
	*A-4651-156-A	(CDP-750:E).....MOUNTED PCB, MAIN	
906	⚠1-551-188-XX	(CDP-750:E).....CORD, POWER	
	⚠1-555-795-00	(CDP-750:AEP)...CORD, POWER, EULO PLUG	
	⚠1-558-204-11	(CDP-750:UK)....CORD, POWER	
	⚠1-558-942-11	(CDP-68/207ESD/750:US,Canadian) ...CORD, POWER (POLAR.SPT-2)	
907	⚠1-526-565-00	(CDP-750:E3)...AC PLUG ADAPTOR	
J301	1-566-921-11	JACK, PIN 2P (LINE OUT)	
J401	1-566-922-11	(CDP-207ESD/750:AEP,UK) ...JACK, PIN 1P (DIGITAL OUT)	
S902	⚠1-571-309-11	(CDP-750:E)...SWITCH (VOLTAGE SELECTOR)	
T901	⚠1-449-024-11	(CDP-68/207ESD/750:US,Canadian) ...TRANSFORMER, POWER	
T901	⚠1-449-025-11	(CDP-750:AEP,UK)...TRANSFORMER, POWER	
T901	⚠1-449-026-11	(CDP-750:E).....TRANSFORMER, POWER	

No.	Part No.	Description	Remarks
101	*4-922-515-01	TABLE, DISK	
102	*4-922-510-01	REINFORCEMENT	
103	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S	
104	A-4665-012-C	MAGNET ASSY	
105	*3-576-990-01	CUSHION	
106	4-917-519-01	LEVER, SET	
107	4-917-514-01	SPRING, TENSION	
108	4-922-508-01	GEAR (DRIVING)	
109	4-917-541-01	SPRING (B)	
110	4-917-508-01	HOLDER, SP	
111	7-685-535-19	SCREW +BTP 2.6X10 TYPE2 N-S	
112	4-918-669-01	SPRING (W)	
113	4-917-515-01	ROLLER	
114	*4-922-514-01	BRACKET (BU-5)	
115	4-917-526-01	SPRING, TENSION	

No.	Part No.	Description	Remarks
116	4-917-507-01	SPRING (H)	
117	*4-922-516-01	CHASSIS (MD)	
118	7-685-552-19	SCREW +BTP 3X25 TYPE2 N-S	
119	0-056-028-00	WASHER, PLAIN, 14 DIA.	
120	4-922-511-01	GEAR (LOADING)	
121	*4-917-523-01	COLLAR, CAM	
122	4-922-512-01	PULLEY	
123	4-917-522-01	BELT	
124	7-621-759-40	+PSW, 2.6X6	
125	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
126	4-923-541-11	SPRING	
908	*1-624-324-11	PC BOARD, L.MOTOR	
909	*1-624-325-11	PC BOARD, TRANSLATION 5	
910	*1-624-323-11	PC BOARD, IN/OUT SW	
M251	A-4608-346-A	MOTOR ASSY, L	
S251	1-571-300-11	SWITCH, ROTARY (LOADING IN/OUT)	

SECTION 4
ELECTRICAL PARTS LIST

(4) OPTICAL PICUP BLOCK (BU-5C)



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks
151	4-917-565-01	SHAFT, SLED	
152	4-917-562-01	INSULATOR	
153	7-621-255-15	SCREW +P 2X3	
154	4-917-567-01	GEAR (M)	
155	4-917-564-01	GEAR (P), FLATNESS	
911	*1-624-322-11	PC BOARD, SL/SP MOTOR	
912	⚠.8-848-062-01	DEVICE, OPTICS (KSS-150A)	
CNJ251	*1-564-720-21	PIN, CONNECTOR (SMALL TYPE) 4P	
M252	X-4917-523-1	ASSY, MOTOR (SPINDLE)	
M253	X-4917-504-1	ASSY, MOTOR (SLED)	
S252	1-571-274-11	SWITCH, LEAF (LIMIT IN)	

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description
901	*1-624-296-11	PC BOARD, POWER SWITCH
902	*1-624-295-11	PC BOARD, FUNCTION
903	*1-624-297-11	PC BOARD, HEADPHONE
904	1-535-684-11	JUMPER, FILM (WITH TERMINAL) (JUMPER FLEXIBLE BOARD)
905	*A-4651-152-A	(CDP-207ESD).....MOUNTED PCB, MAIN
	*A-4651-154-A	(CDP-68/750:US,Canadian) ...MOUNTED PCB, MAIN
	*A-4651-155-A	(CDP-750:AEP,UK)...MOUNTED PCB, MAIN
	*A-4651-156-A	(CDP-750:E).....MOUNTED PCB, MAIN
906	⚠.1-551-188-XX	(CDP-750:E).....CORD, POWER
	⚠.1-555-795-00	(CDP-750:AEP)...CORD, POWER, EULO PLUG
	⚠.1-558-204-11	(CDP-750:UK)....CORD, POWER
	⚠.1-558-942-11	(CDP-68/207ESD/750:US,Canadian) ...CORD, POWER (POLAR.SPT-2)
907	⚠.1-526-565-00	(CDP-750:E3)....AC PLUG ADAPTOR
908	*1-624-324-11	PC BOARD, L.MOTOR
909	*1-624-325-11	PC BOARD, TRANSLATION 5
910	*1-624-323-11	PC BOARD, IN/OUT SW
911	*1-624-322-11	PC BOARD, SL/SP MOTOR
912	⚠.8-848-062-01	DEVICE, OPTICS (KSS-150A)

Ref.No.	Part No.	Description			
C007	1-123-875-11	ELECT	10MF	20%	50V
C008	1-123-875-11	ELECT	10MF	20%	50V
C009	1-124-472-11	ELECT	470MF	20%	6.3V
C010	1-124-472-11	ELECT	470MF	20%	6.3V
C012	1-124-919-11	ELECT	220MF	20%	63V
C013	1-124-122-11	ELECT	100MF	20%	50V
C014	1-124-927-11	ELECT	4.7MF	20%	50V
C015	1-124-927-11	ELECT	4.7MF	20%	50V
C101	1-106-351-00	MYLAR	0.0022MF	5%	50V
C102	1-162-198-31	CERAMIC	8.2PF	10%	50V
C103	1-124-477-11	ELECT	47MF	20%	16V
C104	1-162-294-31	CERAMIC	0.001MF	10%	50V
C105	1-124-898-11	ELECT	4700MF	20%	16V
C106	1-124-887-00	ELECT	3300MF	20%	16V
C107	1-124-477-11	ELECT	47MF	20%	16V
C108	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C109	1-130-489-00	MYLAR	0.033MF	5%	50V
C110	1-130-483-00	MYLAR	0.01MF	5%	50V
C111	1-124-908-11	ELECT	22MF	20%	25V
C112	1-124-477-11	ELECT	47MF	20%	16V
C113	1-162-294-31	CERAMIC	0.001MF	10%	50V
C114	1-162-294-31	CERAMIC	0.001MF	10%	50V
C115	1-162-851-11	CERAMIC	0.1MF	20%	16V
C116	1-124-908-11	ELECT	22MF	20%	25V
C117	1-124-477-11	ELECT	47MF	20%	16V
C118	1-130-768-00	FILM	0.1MF	5%	63V
C119	1-130-489-00	MYLAR	0.033MF	5%	50V
C120	1-161-329-00	CERAMIC	0.0068MF	20%	16V

Ref.No.	Part No.	Description			
C121	1-162-851-11	CERAMIC	0.1MF	20%	16V
C122	1-123-382-00	ELECT	3.3MF	20%	50V
C123	1-130-768-00	FILM	0.1MF	5%	63V
C124	1-123-875-11	ELECT	10MF	20%	50V
C125	1-124-908-11	ELECT	22MF	20%	25V
C126	1-162-851-11	CERAMIC	0.1MF	20%	16V
C127	1-124-908-11	ELECT	22MF	20%	25V
C128	1-162-851-11	CERAMIC	0.1MF	20%	16V
C129	1-124-499-11	ELECT	1MF	20%	50V
C130	1-124-499-11	ELECT	1MF	20%	50V
C131	1-161-377-00	CERAMIC	0.0047MF	30%	16V
C132	1-124-927-11	ELECT	4.7MF	20%	50V
C133	1-124-499-11	ELECT	1MF	20%	50V
C134	1-124-477-11	ELECT	47MF	20%	16V
C135	1-162-294-31	CERAMIC	0.001MF	10%	50V
C136	1-162-282-31	CERAMIC	100PF	10%	50V
C137	1-162-851-11	CERAMIC	0.1MF	20%	16V
C138	1-126-101-11	ELECT	100MF	20%	16V
C139	1-126-101-11	ELECT	100MF	20%	16V
C140	1-124-902-00	ELECT	0.47MF	20%	50V
C141	1-130-489-00	MYLAR	0.033MF	5%	50V
C142	1-124-902-00	ELECT	0.47MF	20%	50V
C143	1-124-908-11	ELECT	22MF	20%	25V
C144	1-124-908-11	ELECT	22MF	20%	25V
C145	1-130-772-00	FILM	0.22MF	5%	63V
C146	1-130-483-00	MYLAR	0.01MF	5%	50V
C147	1-162-199-31	CERAMIC	10PF	5%	50V
C148	1-162-199-31	CERAMIC	10PF	5%	50V
C149	1-161-379-00	CERAMIC	0.01MF	20%	16V
C162	1-162-294-31	CERAMIC	0.001MF	10%	50V
C163	1-130-489-00	MYLAR	0.033MF	5%	50V
C164	1-124-499-11	ELECT	1MF	20%	50V
C165	1-124-499-11	ELECT	1MF	20%	50V
C201	1-124-122-11	ELECT	100MF	20%	50V
C202	1-124-913-11	ELECT	470MF	20%	50V
C203	1-124-122-11	ELECT	100MF	20%	50V
C204	1-124-912-11	ELECT	330MF	20%	50V
C205	1-124-499-11	ELECT	1MF	20%	50V
C208	1-162-290-31	CERAMIC	470PF	10%	50V
C209	1-124-927-11	ELECT	4.7MF	20%	50V
C251	1-136-157-00	FILM	0.022MF	5%	50V
C252	1-106-351-00	MYLAR	0.0022MF	5%	50V
C253	1-106-351-00	MYLAR	0.0022MF	5%	50V
C302	1-162-203-31	(CDP-207ESD/750:AEP,UK) ...CERAMIC	15PF	5%	50V
C302	1-162-207-31	(CDP-68/750:US,Canadian,E) ...CERAMIC	22PF	5%	50V

Ref.No.	Part No.	Description			
C303	1-162-203-31	(CDP-207ESD/750:AEP,UK)			
		...CERAMIC	15PF	5%	50V
C303	1-162-207-31	(CDP-68/750:US,Canadian,E)			
		...CERAMIC	22PF	5%	50V
C304	1-124-444-00	ELECT	220MF	20%	6.3V
C305	1-124-444-00	ELECT	220MF	20%	6.3V
C306	1-161-494-00	CERAMIC	0.022MF		25V
C307	1-161-494-00	CERAMIC	0.022MF		25V
C308	1-161-494-00	CERAMIC	0.022MF		25V
C309	1-161-494-00	CERAMIC	0.022MF		25V
C310	1-161-494-00	CERAMIC	0.022MF		25V
C311	1-161-494-00	CERAMIC	0.022MF		25V
C312	1-162-851-11	CERAMIC	0.1MF	20%	16V
C313	1-161-494-00	CERAMIC	0.022MF		25V
C314	1-161-494-00	CERAMIC	0.022MF		25V
C315	1-161-494-00	CERAMIC	0.022MF		25V
C316	1-161-494-00	CERAMIC	0.022MF		25V
C317	1-161-494-00	CERAMIC	0.022MF		25V
C318	1-161-494-00	CERAMIC	0.022MF		25V
C319	1-162-851-11	CERAMIC	0.1MF	20%	16V
C320	1-162-290-31	CERAMIC	470PF	10%	50V
C321	1-130-474-00	MYLAR	0.0018MF	5%	50V
C322	1-130-474-00	MYLAR	0.0018MF	5%	50V
C323	1-126-103-11	ELECT	470MF	20%	16V
C324	1-126-103-11	ELECT	470MF	20%	16V
C325	1-123-332-00	ELECT	47MF	20%	25V
C326	1-123-332-00	ELECT	47MF	20%	25V
C327	1-130-488-00	MYLAR	0.027MF	5%	50V
C328	1-130-488-00	MYLAR	0.027MF	5%	50V
C329	1-106-343-00	MYLAR	0.001MF	5%	50V
C330	1-106-343-00	MYLAR	0.001MF	5%	50V
C401	1-124-908-11	(CDP-207ESD/750:AEP,UK)			
		...ELECT	22MF	20%	25V
C402	1-124-908-11	(CDP-207ESD/750:AEP,UK)			
		...ELECT	22MF	20%	25V
C406	1-162-851-11	(CDP-207ESD/750:AEP,UK)			
		...CERAMIC	0.1MF	20%	16V
C407	1-162-282-31	(CDP-207ESD/750:AEP,UK)			
		...CERAMIC	100PF	10%	50V
C501	1-124-443-00	ELECT	100MF	20%	10V
C502	1-124-443-00	ELECT	100MF	20%	10V
C503	1-162-290-31	CERAMIC	470PF	10%	50V
C504	1-162-290-31	CERAMIC	470PF	10%	50V
C601	1-124-638-11	ELECT	22MF	20%	6.3V
C602	1-124-638-11	ELECT	22MF	20%	6.3V
C603	1-123-611-00	ELECT	1MF	20%	50V
C604	1-162-851-11	CERAMIC	0.1MF	20%	16V
C605	1-162-290-31	CERAMIC	470PF	10%	50V
C606	1-162-290-31	CERAMIC	470PF	10%	50V
C607	1-162-290-31	CERAMIC	470PF	10%	50V
CN256	*1-564-336-51	PIN, CONNECTOR 2P			
CN258	*1-564-337-51	PIN, CONNECTOR 3P			
CN260	*1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
CNJ251	*1-564-720-21	PIN, CONNECTOR (SMALL TYPE) 4P			
CNJ501	*1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CNP001	*1-564-340-00	PIN, CONNECTOR 6P			
CNP101	*1-564-706-31	PIN, CONNECTOR (SMALL TYPE) 4P			
CNP102	*1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			

Ref.No.	Part No.	Description
CNP103	*1-564-706-41	PIN, CONNECTOR (SMALL TYPE) 4P
CNP104	*1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P
CNP105	*1-564-339-61	PIN, CONNECTOR 5P
CNP106	1-566-908-11	SOCKET, CONNECTOR 32P
CNP301	*1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P
CNP701	*1-564-499-11	PIN, CONNECTOR 6P
D1	⚠8-719-200-02	DIODE 10E2
D2	⚠8-719-200-02	DIODE 10E2
D3	⚠8-719-200-02	DIODE 10E2
D4	⚠8-719-200-02	DIODE 10E2
D5	⚠8-719-200-02	DIODE 10E2
D6	⚠8-719-200-02	DIODE 10E2
D7	⚠8-719-200-02	DIODE 10E2
D8	⚠8-719-200-02	DIODE 10E2
D9	⚠8-719-200-02	DIODE 10E2
D10	8-719-109-83	DIODE RD5.1ESB
D11	8-719-940-76	DIODE 1SS132
D12	8-719-940-76	DIODE 1SS132
D13	8-719-940-76	DIODE 1SS132
D14	8-719-940-76	DIODE 1SS132
D105	8-719-940-76	DIODE 1SS132
D106	8-719-940-76	DIODE 1SS132
D601	8-719-940-76	DIODE 1SS132
D602	8-719-940-76	DIODE 1SS132
D603	8-719-940-76	DIODE 1SS132
D604	8-719-940-76	DIODE 1SS132
D605	8-719-940-76	DIODE 1SS132
D606	8-719-940-76	DIODE 1SS132
D607	8-719-940-76	DIODE 1SS132
D608	8-719-933-57	DIODE HZS9B2L
FLD601	1-519-411-11	INDICATOR TUBE, FLUORESCENT
IC1	8-752-031-80	IC CXA1081S
IC2	8-752-032-33	IC CXA1182S
IC3	8-752-322-04	IC CXD1125Q
IC4	8-759-939-35	IC CXD1088Q
IC5	8-759-939-94	IC TDA1541-N5
IC6	8-759-601-02	IC M5218P
IC7	8-759-208-96	IC TA8406P
IC8	8-759-805-18	IC LA6520
IC9	8-759-630-21	IC M5290P-16
IC10	8-759-605-43	IC M5231TL
IC11	8-759-602-66	IC M5230L-A
IC12	8-759-605-44	(CDP-207ESD/750:AEP,UK)..IC M74HC6004P
IC13	8-752-320-44	IC CXK5816M-10L
IC101	8-759-945-87	IC MSC6458-17SS
IC102	8-741-138-70	IC BX-1387
IC201	8-759-106-41	IC UPC4570C
J301	1-566-921-11	JACK, PIN 2P (LINE OUT)
J401	1-566-922-11	(CDP-207ESD/750:AEP,UK)
		...JACK, PIN 1P (DIGITAL OUT)
J501	1-563-485-21	JACK, LARGE TYPE (HEADPHONES)
L101	1-408-563-00	INDUCTOR 10UH
L401	*1-410-858-11	(CDP-207ESD/750:AEP,UK)
		....INDUCTOR, SMALL TYPE
M251	A-4608-346-A	MOTOR ASSY, L
M252	X-4917-523-1	ASSY, MOTOR (SPINDLE)
M253	X-4917-504-1	ASSY, MOTOR (SLED)

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			
PS001	1-532-637-00	(CDP-750:AEP,UK,E)...LINK, IC			
PS002	1-532-637-00	(CDP-750:AEP,UK,E)...LINK, IC			
PS101	1-532-605-00	(CDP-750:AEP,UK,E)...LINK, IC			
PS102	1-532-605-00	(CDP-750:AEP,UK,E)...LINK, IC			
PS201	1-532-685-00	(CDP-750:AEP,UK,E)...LINK, IC			
PS202	1-532-685-00	(CDP-750:AEP,UK,E)...LINK, IC			
Q1	8-729-808-72	TRANSISTOR 2SB1274SA			
Q2	8-729-808-76	TRANSISTOR 2SD1913SA			
Q3	8-729-806-38	TRANSISTOR 2SC3399			
Q4	8-729-806-38	TRANSISTOR 2SC3399			
Q5	8-729-806-38	TRANSISTOR 2SC3399			
Q6	8-729-806-20	TRANSISTOR 2SA1345			
Q7	8-729-801-83	TRANSISTOR 2SB1013			
Q8	8-729-806-28	TRANSISTOR 2SC3402			
Q9	8-729-806-38	TRANSISTOR 2SC3399			
Q10	8-729-806-38	TRANSISTOR 2SC3399			
Q11	8-729-806-38	TRANSISTOR 2SC3399			
Q12	8-729-107-99	TRANSISTOR 2SC3622A-K			
Q13	8-729-107-99	TRANSISTOR 2SC3622A-K			
Q14	8-729-806-32	TRANSISTOR 2SC3860			
Q15	8-729-806-32	TRANSISTOR 2SC3860			
Q20	8-729-806-20	TRANSISTOR 2SA1345			
Q21	8-729-802-22	TRANSISTOR 2SB1014			
Q22	8-729-806-32	TRANSISTOR 2SC3860			
Q23	8-729-806-32	TRANSISTOR 2SC3860			
Q24	8-729-806-20	TRANSISTOR 2SA1345			
Q25	8-729-806-20	TRANSISTOR 2SA1345			
Q26	8-729-806-38	TRANSISTOR 2SC3399			
Q601	8-729-806-28	TRANSISTOR 2SC3402			
Q602	8-729-806-28	TRANSISTOR 2SC3402			
Q603	8-729-806-28	TRANSISTOR 2SC3402			
Q604	8-729-806-28	TRANSISTOR 2SC3402			
Q605	8-729-806-28	TRANSISTOR 2SC3402			
R001	1-249-429-11	CARBON	10K	5%	1/4W
R002	1-249-425-11	CARBON	4.7K	5%	1/4W
R003	1-249-425-11	CARBON	4.7K	5%	1/4W
R004	1-249-423-11	CARBON	3.3K	5%	1/4W
R005	1-249-431-11	CARBON	15K	5%	1/4W
R006	1-215-464-00	CARBON	62K	5%	1/4W
R007	1-249-417-11	CARBON	1K	5%	1/4W
R008	1-249-423-11	CARBON	3.3K	5%	1/4W
R009	1-249-425-11	CARBON	4.7K	5%	1/4W
R101	1-249-428-11	CARBON	8.2K	5%	1/4W
R102	1-215-450-00	CARBON	16K	5%	1/4W
R103	1-249-421-11	CARBON	2.2K	5%	1/4W
R104	1-214-092-00	METAL	22	1%	1/4W
R105	1-215-396-00	CARBON	91	5%	1/4W
R106	1-249-433-11	CARBON	22K	5%	1/4W
R107	1-249-417-11	CARBON	1K	5%	1/4W
R108	1-249-432-11	CARBON	18K	5%	1/4W
R109	1-249-432-11	CARBON	18K	5%	1/4W
R110	1-249-425-11	CARBON	4.7K	5%	1/4W
R111	1-249-425-11	CARBON	4.7K	5%	1/4W
R112	1-249-417-11	CARBON	1K	5%	1/4W
R113	1-215-472-00	CARBON	130K	5%	1/4W
R114	1-247-881-00	CARBON	120K	5%	1/4W
R115	1-215-472-00	CARBON	130K	5%	1/4W
R116	1-247-881-00	CARBON	120K	5%	1/4W

Ref.No.	Part No.	Description			
R117	1-249-381-11	CARBON	1	5%	1/4W
R118	1-249-393-11	CARBON	10	5%	1/4W
R119	1-215-472-00	CARBON	130K	5%	1/4W
R120	1-249-393-11	CARBON	10	5%	1/4W
R122	1-249-440-11	CARBON	82K	5%	1/4W
R123	1-215-479-00	CARBON	270K	5%	1/4W
R124	1-249-435-11	CARBON	33K	5%	1/4W
R125	1-249-393-11	CARBON	10	5%	1/4W
R126	1-249-423-11	CARBON	3.3K	5%	1/4W
R127	1-249-425-11	CARBON	4.7K	5%	1/4W
R128	1-249-393-11	CARBON	10	5%	1/4W
R129	1-249-429-11	CARBON	10K	5%	1/4W
R130	1-215-486-00	CARBON	510K	5%	1/4W
R131	1-249-433-11	CARBON	22K	5%	1/4W
R132	1-249-414-11	CARBON	560	5%	1/4W
R133	1-249-441-11	CARBON	100K	5%	1/4W
R134	1-215-434-00	METAL	3.6K	1%	1/6W
R135	1-249-441-11	CARBON	100K	5%	1/4W
R136	1-249-437-11	CARBON	47K	5%	1/4W
R137	1-249-436-11	CARBON	39K	5%	1/4W
R138	1-249-393-11	CARBON	10	5%	1/4W
R139	1-249-381-11	CARBON	1	5%	1/4W
R140	1-249-429-11	CARBON	10K	5%	1/4W
R141	1-215-493-00	CARBON	1M	5%	1/4W
R142	1-249-433-11	CARBON	22K	5%	1/4W
R143	1-249-441-11	CARBON	100K	5%	1/4W
R144	1-249-441-11	CARBON	100K	5%	1/4W
R145	1-249-429-11	CARBON	10K	5%	1/4W
R146	1-215-469-00	METAL	100K	1%	1/6W
R147	1-215-469-00	METAL	100K	1%	1/6W
R150	1-249-429-11	CARBON	10K	5%	1/4W
R151	1-249-417-11	CARBON	1K	5%	1/4W
R152	1-249-417-11	CARBON	1K	5%	1/4W
R153	1-249-417-11	CARBON	1K	5%	1/4W
R154	1-249-417-11	CARBON	1K	5%	1/4W
R155	1-249-429-11	CARBON	10K	5%	1/4W
R163	1-249-438-11	CARBON	56K	5%	1/4W
R164	1-249-424-11	CARBON	3.9K	5%	1/4W
R165	1-249-429-11	CARBON	10K	5%	1/4W
R166	1-249-417-11	CARBON	1K	5%	1/4W
R167	1-249-417-11	CARBON	1K	5%	1/4W
R168	1-249-417-11	CARBON	1K	5%	1/4W
R197	1-249-417-11	CARBON	1K	5%	1/4W
R201	1-215-493-00	CARBON	1M	5%	1/4W
R202	1-249-423-11	CARBON	3.3K	5%	1/4W
R203	1-215-454-00	CARBON	24K	5%	1/4W
R204	1-249-414-11	CARBON	560	5%	1/4W
R205	1-249-431-11	CARBON	15K	5%	1/4W
R206	1-249-431-11	CARBON	15K	5%	1/4W
R301	1-249-411-11	CARBON	330	5%	1/4W
R302	1-249-417-11	CARBON	1K	5%	1/4W
R303	1-249-417-11	CARBON	1K	5%	1/4W
R304	1-249-417-11	CARBON	1K	5%	1/4W
R305	1-259-434-11	CARBON	1.8K	5%	1/6W
R306	1-259-434-11	CARBON	1.8K	5%	1/6W
R307	1-259-488-11	CARBON	330K	5%	1/6W
R308	1-259-488-11	CARBON	330K	5%	1/6W
R309	1-259-424-11	CARBON	680	5%	1/6W

Ref.No.	Part No.	Description			
R310	1-259-424-11	CARBON	680	5%	1/6W
R311	1-259-422-11	CARBON	560	5%	1/6W
R312	1-259-422-11	CARBON	560	5%	1/6W
R313	1-249-425-11	CARBON	4.7K	5%	1/4W
R314	1-249-425-11	CARBON	4.7K	5%	1/4W
R315	1-249-441-11	CARBON	100K	5%	1/4W
R316	1-249-441-11	CARBON	100K	5%	1/4W
R319	1-259-424-11	CARBON	680	5%	1/6W
R320	1-259-424-11	CARBON	680	5%	1/6W
R321	1-259-460-11	CARBON	22K	5%	1/6W
R322	1-259-460-11	CARBON	22K	5%	1/6W
R323	1-259-500-11	CARBON	1M	5%	1/6W
R324	1-259-500-11	CARBON	1M	5%	1/6W
R325	1-259-404-11	CARBON	100	5%	1/6W
R326	1-259-404-11	CARBON	100	5%	1/6W
R327	1-259-423-11	CARBON	620	5%	1/6W
R328	1-259-423-11	CARBON	620	5%	1/6W
R401	1-249-412-11	(CDP-207ESD/750:AEP,UK) ...CARBON 390		5%	1/4W
R402	1-215-396-00	(CDP-207ESD/750:AEP,UK) ...CARBON 91		5%	1/4W
R403	1-249-417-11	(CDP-207ESD/750:AEP,UK) ...CARBON 1K		5%	1/4W
R501	1-259-428-11	CARBON	1K	5%	1/6W
R502	1-259-428-11	CARBON	1K	5%	1/6W
R503	1-259-460-11	CARBON	22K	5%	1/6W
R504	1-259-460-11	CARBON	22K	5%	1/6W
R505	1-259-450-11	CARBON	8.2K	5%	1/6W
R506	1-259-450-11	CARBON	8.2K	5%	1/6W
R507	1-259-404-11	CARBON	100	5%	1/6W
R508	1-259-404-11	CARBON	100	5%	1/6W
R601	1-249-435-11	CARBON	33K	5%	1/4W
R602	1-249-435-11	CARBON	33K	5%	1/4W
R603	1-249-435-11	CARBON	33K	5%	1/4W
R604	1-249-435-11	CARBON	33K	5%	1/4W
R605	1-249-435-11	CARBON	33K	5%	1/4W
R606	1-249-435-11	CARBON	33K	5%	1/4W
R607	1-249-435-11	CARBON	33K	5%	1/4W
R608	1-249-425-11	CARBON	4.7K	5%	1/4W
R609	1-249-425-11	CARBON	4.7K	5%	1/4W
R610	1-249-425-11	CARBON	4.7K	5%	1/4W
R611	1-249-425-11	CARBON	4.7K	5%	1/4W
R612	1-249-421-11	CARBON	2.2K	5%	1/4W
RV101	1-228-995-00	RES, ADJ, CARBON 22K (E-F BALANCE)			
RV102	1-228-993-00	RES, ADJ, CARBON 4.7K (FOCUS BIAS)			
RV103	1-228-995-00	RES, ADJ, CARBON 22K (FOCUS GAIN)			
RV104	1-228-995-00	RES, ADJ, CARBON 22K (TRACKING GAIN)			
RV105	1-228-990-00	RES, ADJ, METAL GLAZE 1K (RF PLL)			
RV501	1-237-789-11	RES, VAR, CARBON 20K/20K (PHONE LEVEL)			
S251	1-571-300-11	SWITCH, ROTARY (LOADING IN/OUT)			
S252	1-571-274-11	SWITCH, LEAF (LIMIT IN)			
S601	1-554-303-21	SWITCH, KEY BOARD (PROGRAM)			
S602	1-554-303-21	SWITCH, KEY BOARD (▷)			
S603	1-554-303-21	SWITCH, KEY BOARD (REPEAT)			
S604	1-554-303-21	SWITCH, KEY BOARD (OPEN/CLOSE)			
S605	1-554-303-21	SWITCH, KEY BOARD (CHECK)			
S606	1-554-303-21	SWITCH, KEY BOARD (CLEAR)			
S607	1-554-303-21	SWITCH, KEY BOARD (SHUFFLE)			
S608	1-554-303-21	SWITCH, KEY BOARD (II)			
S609	1-554-303-21	SWITCH, KEY BOARD (AUTO SPACE)			
S610	1-554-303-21	SWITCH, KEY BOARD (⏮)			
S611	1-554-303-21	SWITCH, KEY BOARD (◀◀)			
S612	1-554-303-21	SWITCH, KEY BOARD (CONTINUE)			
S613	1-554-303-21	SWITCH, KEY BOARD (■)			
S614	1-554-303-21	SWITCH, KEY BOARD (DISPLAY)			

Ref.No.	Part No.	Description
S615	1-554-303-21	SWITCH, KEY BOARD (▷▷⏭)
S616	1-554-303-21	SWITCH, KEY BOARD (▶▶)
S617	1-554-303-21	SWITCH, KEY BOARD (1)
S618	1-554-303-21	SWITCH, KEY BOARD (2)
S619	1-554-303-21	SWITCH, KEY BOARD (3)
S620	1-554-303-21	SWITCH, KEY BOARD (4)
S621	1-554-303-21	SWITCH, KEY BOARD (5)
S622	1-554-303-21	SWITCH, KEY BOARD (——)
S623	1-554-303-21	SWITCH, KEY BOARD (6)
S624	1-554-303-21	SWITCH, KEY BOARD (7)
S625	1-554-303-21	SWITCH, KEY BOARD (8)
S626	1-554-303-21	SWITCH, KEY BOARD (9)
S627	1-554-303-21	SWITCH, KEY BOARD (10)
S628	1-554-303-21	SWITCH, KEY BOARD (——)
S629	1-554-303-21	SWITCH, KEY BOARD (11)
S630	1-554-303-21	SWITCH, KEY BOARD (12)
S631	1-554-303-21	SWITCH, KEY BOARD (13)
S632	1-554-303-21	SWITCH, KEY BOARD (14)
S633	1-554-303-21	SWITCH, KEY BOARD (15)
S634	1-554-303-21	SWITCH, KEY BOARD (>20)
S635	1-554-303-21	SWITCH, KEY BOARD (16)
S636	1-554-303-21	SWITCH, KEY BOARD (17)
S637	1-554-303-21	SWITCH, KEY BOARD (18)
S638	1-554-303-21	SWITCH, KEY BOARD (19)
S639	1-554-303-21	SWITCH, KEY BOARD (20)
S701	1-571-305-11	SWITCH, PUSH (1 KEY)(POWER)
S902	⚠1-571-309-11	(CDP-750:E)...SWITCH (VOLTAGE SELECTOR)
T901	⚠1-449-024-11	(CDP-68/207ESD/750:US,Canadian) ...TRANSFORMER, POWER
T901	⚠1-449-025-11	(CDP-750:AEP,UK)...TRANSFORMER, POWER
T901	⚠1-449-026-11	(CDP-750:E).....TRANSFORMER, POWER
X301	1-567-908-11	(CDP-68/750:US,Canadian,E) ....VIBRATOR, CRYSTAL
X301	1-567-926-11	(CDP-207ESD/750:AEP,UK) ....VIBRATOR, CRYSTAL
X601	1-567-686-11	OSCILLATOR, CERAMIC (4MHz)

ACCESSORY & PACKING MATERIAL

	1-463-923-11	REMOTO COMMANDER (RM-D450)
	1-558-543-11	CORD, CONNECTION
	3-565-234-00	(CDP-750:E)...BAG, PROTECTION
	3-704-346-01	(CDP-68/207ESD/750:US,Canadian,AEP,UK) ...SHEET (STANDARD)
	3-703-390-01	(CDP-68/207ESD/750:US)...INSTRUCTION
*	3-795-629-11	(CDP-750:AEP).....INSTRUCTION
	3-769-585-11	(CDP-750:AEP,UK,Canadian,E) ...MANUAL, INSTRUCTION
	3-769-585-21	(CDP-750:US).....MANUAL, INSTRUCTION
	3-769-585-41	(CDP-750:AEP).....MANUAL, INSTRUCTION
	3-769-585-51	(CDP-207ESD).....MANUAL, INSTRUCTION
	3-769-585-61	(CDP-68).....MANUAL, INSTRUCTION
	4-922-417-01	LID, BATTERY CASE (FOR RM-D450)
*	4-922-581-01	CUSHION
	4-922-517-51	(CDP-750).....INDIVIDUAL CARTON
	4-922-517-61	(CDP-207ESD)...INDIVIDUAL CARTON
	4-922-517-71	(CDP-68).....INDIVIDUAL CARTON

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ *sont critiques pour la sécurité.*
Ne les remplacer que par une pièce portant le numéro spécifié.

Troubleshooting

The following checks will assist in the correction of most problems which you may encounter with your unit.
Before going through the check list below, first refer back to the connection and operating procedures.

Should any problem persist after you have made these checks, consult your nearest Sony service facility.

Symptom	Cause	Countermeasures
Play does not begin.	The disc is incorrectly inserted.	Insert the disc correctly.
	The disc is extremely dirty.	Clean the disc.
	The disc is inserted upside down.	Insert the disc correctly.
	The ❚❚ button has been pressed.	Press ❚❚ button again to release pause.
	Moisture condensation.	Leave the player turned on for about an hour.
No audio from one or both channels.	Incorrect connections.	Connect properly.

9-953-058-11

Sony Corporation
Audio Group

English
87L0294-1
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CDP-68/207ESD/750

SONY.
SERVICE MANUAL

US Model
CDP-68
US Model
CDP-207ESD
US Model
Canadian Model
AEP Model
UK Model
E Model
CDP-750

SUPPLEMENT-1

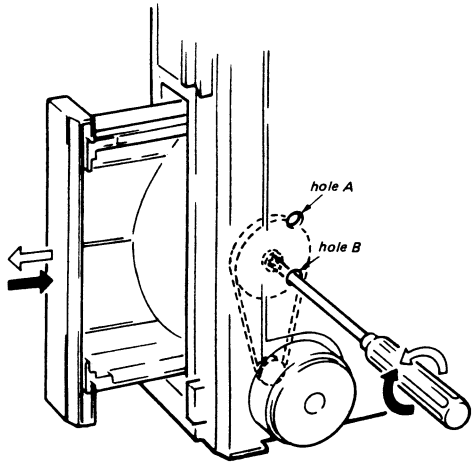
File this supplement with the service manual.

- Use this manual together with the previously issued Service Manual.
  The supplement of a CDP-68/CDP-750's Service Manual is not issued, so use this manual's supplement.
- For models (employing a CDM9-5/6 (CD mechanism block)) other than this set, refer to this manual's supplement.

- **REMOVAL OF DISCTABLE.**
- **CAUTION ON INSTALLING LOADING GEAR.**

– SERVICING NOTE –

MANUAL OPENING OF DISCTABLE

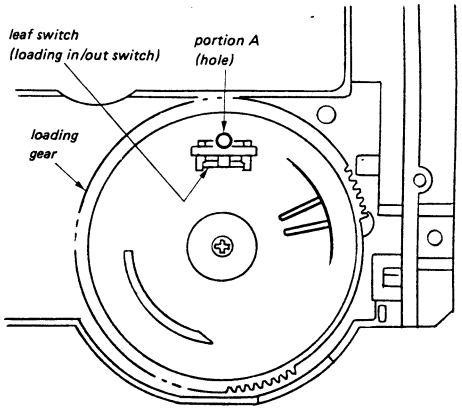


- How to open the disctable manually.
  Insert a screwdriver(+) into the B hole on the bottom plate as shown in the figure and turn the loading-pully shaft counter-clockwise, then the disctable will push out slowly.

- Caution on closing the disctable.
  The disctable cannot be stored thoroughly in the cabinet, when the optical block is under a chucking state. To recover from the chucking state, turn the driver through the B hole gradually and close the disctable.

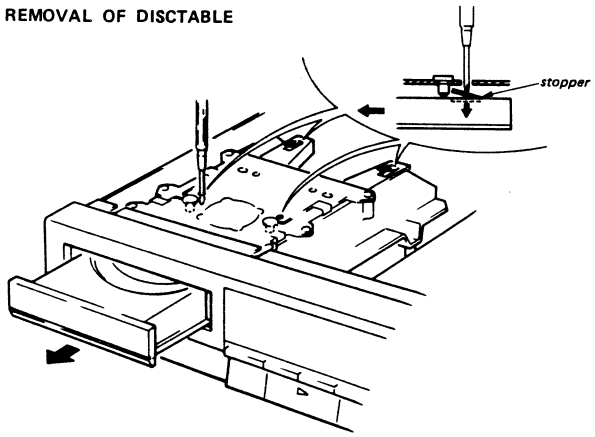
CAUTION ON INSTALLING LOADING GEAR

Align portion A (hole) of the loading gear with the position of a leaf switch (loading in/out switch), then install the loading gear.



(FRONT SIDE)

REMOVAL OF DISCTABLE



- How to remove the disctable.
  Pull out the disctable fully. Press the stoppers down with a precision driver to release the disctable from them and remove it.

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